NATIONAL GEOGRAPHIC
Activity*apply*

Conduct a Micro-Expedition

What final preparations are needed for a carrying out a micro-expedition and communicating the outcome?

Overview

Students conduct their micro-expedition based on planning from previous activities. They then create a presentation, blog post, or other display of their expedition and findings.

For the complete activity with media resources, visit:
http://education.nationalgeographic.org/activity/conduct-micro-expedition/

Directions

1. Make final preparations for the micro-expeditions.

Have students revisit their expedition planning document, their chart listing team roles and media collection, and the ethics considerations. Have them determine if changes are needed. You can have them create a final checklist of what they need to do. If students are overly ambitious with their goals, remind them that in exploring a place for the first time they should plan to make simple observations, and that this type of exploration takes focus, concentration, and sensory awareness. Have them build into the planning some time for silent observations during which they describe what they see, hear, and smell. Also explain that a key element of exploration and expeditions is coming away with new questions; it will not be possible to answer all of their questions at once.

2. Plan ahead for communicating their findings.

Have students plan how to share their findings with a larger audience. Ask: *Who will write about different aspects, create the maps, develop the videos, and/or write captions for photos?* Talk about how having these roles in mind during the expedition will help in the communicating afterward. Students might want to use a GPS unit to collect lat/long coordinates for where they collect certain information or data, or use a camera that automatically geo-references images, so that they can plot this on a map, such as MapMaker Interactive, afterward.

3. Conduct the micro-expedition.

Have students conduct their field-based “micro-expedition” as planned, using skills of observation, recording notes, sketching, and use of cameras for both images and video.

4. Reflect and evaluate.

As soon as possible after the expedition, give students time to free-write about their reflections on the micro-expedition. Ask:

- *What are the key findings?*
- *What observations were made?*
- *What did you observe that you expected to see?*
- *What did you not expect to see?*
- *What new questions do you have about this place?*

Next have students reflect on their expedition in small groups, using the materials they developed in the planning stage (i.e., planning sheet, ethics statement, multidisciplinary work statement) to evaluate how well they think the micro-expedition was carried out. Ask: *Did we adhere to our plan? Why or why not? What obstacles came up? How did your group work together?* Have a whole group discussion of the outcomes of their expedition.

5. Create a product to communicate findings to a new audience.

Have students use their notes, reflections, sketches, images, and video to create a presentation, blog post, slideshow, bulletin board, GeoTour (using the MapMaker Interactive), or other display to educate new audiences about their findings. Consider having students present to park rangers, community leaders, or other stakeholders about their expedition process and their observations.

Modification

Another option is to have students work in small groups to plan and conduct micro-expeditions on school grounds.

Tip

Make sure each student has a small field notebook and pen or pencil for writing notes and making sketches.

Modification

Modify this activity based on available class time. You can have students conduct their expeditions in small groups outside of school with parent help, or do it as a class as part of a field trip.

Tip

Request maps of the micro-expedition ahead of time for students to use in their preparation, or have students make their own maps using MapMaker Interactive.

Informal Assessment

Evaluate student's reflections and their final product communicating their micro-expedition process and findings based. Consider having students develop a list of micro-expedition planning tips for the next class undertaking a similar project.

Extending the Learning

Have students take their new questions and choose one to further explore. What scientific disciplines or fields would an expedition to address this question involve? Have students do further research on the question to find out current knowledge about this topic.

Objectives

Subjects & Disciplines

Educational Technology

- Audio-visual equipment
- Integrating technology into the classroom
- Multimedia education

Language Arts

- Speech
- Storytelling
- Writing (composition)

Science

- Earth science
- Ecology
- General science

Learning Objectives

Students will:

- Evaluate plan for a micro-expedition and determine changes needed
- Execute their plan while making observations and collecting data and media
- Evaluate implementation of micro-expedition
- Create a presentation or other display to share with new audiences

Teaching Approach

- Learning-for-use

Teaching Methods

- Discussions
- Experiential learning
- Reflection
- Writing

Skills Summary

This activity targets the following skills:

- 21st Century Student Outcomes
  - Information, Media, and Technology Skills
    - Media Literacy
  - Learning and Innovation Skills
    - Communication and Collaboration
    - Critical Thinking and Problem Solving
- Geographic Skills
  - Acquiring Geographic Information
  - Asking Geographic Questions
  - Organizing Geographic Information
- Science and Engineering Practices
  - Planning and carrying out investigations

National Standards, Principles, and Practices

IRA/NCTE Standards for the English Language Arts

• Standard 12:
Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).
• Standard 8:
Students use a variety of technological and informational resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

National Council for Social Studies Curriculum Standards

• Theme 3:
People, Places, and Environments

National Geography Standards

• Standard 4:
The physical and human characteristics of places

National Science Education Standards

• (5-8) Standard G-1:
Science as a human endeavor
• (5-8) Standard G-2:
Nature of science
• (5-8) Standard G-3:
History of science
• (9-12) Standard G-1:

Science as a human endeavor
• **(9-12) Standard G-2:**
Nature of scientific knowledge
• **(9-12) Standard G-3:**
Historical perspectives

Preparation

What You'll Need

Materials You Provide

- Notebooks
- Pencils, pens

Required Technology

- Internet Access: Optional
- Tech Setup: 1 computer per classroom, 1 computer per small group, Digital camera (and related equipment), GPS units, Media production software, Monitor/screen, Presentation software, Projector, Speakers, Video camera (and related equipment)

Physical Space

- Classroom
- Outdoor natural environment

Grouping

- Large-group instruction
- Large-group learning
- Small-group learning
- Small-group work

Accessibility Notes

Check with parks and related outdoor destinations for accessibility information.

Other Notes

This activity will need to extend for a class period before and after the field-based micro-expedition.

Background & Vocabulary

Background Information

For this final activity, it is important to encourage students in their exploration and explain that things may not go completely according to plan and they won't be able to answer everything they want to, but that is part of the discovery process. Encourage students to use this as a learning opportunity to understand more about what it takes to engage in expeditions and about their own abilities to work as part of a team and think like an explorer.

Prior Knowledge

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Recommended Prior Activities

- None

Vocabulary

Term	Part of Speech	Definition
expedition	*noun*	journey with a specific purpose, such as exploration.
exploration	*noun*	study and investigation of unknown places, concepts, or issues.

For Further Exploration

Reference

- National Geographic Education: Schoolyard Bioblitz

Websites

- National Geographic Education: BioBlitz

Partner